University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Crop Watch Extension

9-11-1998

CropWatch No. 98-23, Sept. 11, 1998

Lisa Brown Jasa
University of Nebraska-Lincoln, ljasa@unlnotes.unl.edu

Follow this and additional works at: https://digitalcommons.unl.edu/cropwatch

Part of the Agriculture Commons

Brown Jasa, Lisa, "CropWatch No. 98-23, Sept. 11, 1998" (1998). *Crop Watch*. 178.
https://digitalcommons.unl.edu/cropwatch/178

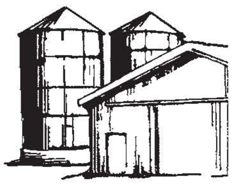
This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Crop Watch by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

CROP WATCH

University of Nebraska Cooperative Extension
Institute of Agriculture and Natural Resources

No. 98-23
Sept. 11, 1998

Store grain on the ground as a last resort



Some producers are considering piling grain on the ground this year as they have seen done at commercial elevators in the past. While recommended only as a last resort, this storage option can be acceptable with correct site preparation, proper grain conditioning before storage, and management like commercial storage.

Elevators basically have two types of on-ground storage, emergency and temporary. **Emergency storage** is for less than a month, until permanent storage opens up or until transportation is available. Very little is invested in storage and management because the grain is moved before too much grain quality is lost. Producers may use emergency storage for grain that is to be fed before winter. **Temporary storage** costs more and is for one to three months, or longer, if the grain is properly protected, aerated, and managed.

For both types of storage, the site must be fairly level and well drained, with all surface drainage moving away from the pile. The surface is usually well packed soil, crowned in the middle for drainage, or concrete, sloped for drainage. The pile should be oriented north and south so that the sun will dry off the sloping sides. The temporary storage will have a plastic liner, at least six mils thick, to reduce moisture migration into the grain from below. To reduce cost, the liner may be omitted from emergency storage.

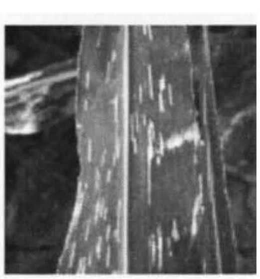
Aeration ducts are placed on the base, down the centerline of the intended pile. A single large duct, about 21 inches in diameter for a 60-by-80-foot pile, will provide the minimum aeration for a pile which is allowed to peak naturally and taper out to the ground surface as in an emergency storage. If self-supporting retaining walls are used to contain the pile in temporary storage, more ductwork is needed to adequately distribute air throughout the grain mass, especially as the wall height increases. If the grain pile is fairly level, duct spacing

(Continued on page 203)

Focus on storage

- *Estimating stored grain, aeration needs*
- *New book details aeration systems*
- *Converting existing farm buildings for storage*
- *Calculating true costs of storage*
- *Proper aeration of stored grain*
- *Also see stories in 98-22* Crop Watch

Corn diseases widespread



Grey leaf spot

Diseases of corn are now widespread across Nebraska, mostly due to unusual summer weather patterns predominated by high humidity levels. From grey leaf spot to stalk rots to maize chlorotic mottle virus, diseases will be reducing what were earlier believed to be bin-busting yields. Direct effects on yield are difficult to predict but could be substantial.

While in some fields stalk rot incidence is just 10%, in other areas it may be as high as 40%.

Particularly this year, producers are running a huge risk that the corn will be on the ground if they wait

(Continued on page 201)

See pages 200 and 203 for more on crop diseases.

Sooty stripe, zonate leaf spot in sorghum

A field crops survey last week showed gray leaf spot to be the predominant disease on corn, summer black stem the predominant alfalfa disease and sooty stripe and zonate leaf spot the predominant diseases of sorghum.

Zonate leaf spot is common on sorghum during wet, humid periods. Disease symptoms are circular, reddish purple bands alternating with straw-colored or tan areas which form a zonate pattern. The spots often occur in semicircular patterns along leaf margins. Abundant spotting on leaves of older plants may prematurely kill the foliage which reduces the grain-fill period. Forage yields of sorghum-sundangrass hybrids is reduced on severely diseases leaves. The fungus causing zonate leaf spot overwinters on infected leaf debris.

Sooty stripe is the most serious disease affecting sorghum in eastern and central Nebraska. This disease is very active during warm humid conditions which certainly have prevailed the last two months. Symptoms start off as small grayish-tan colored spots that develop into large grayish elliptical blotches. During warm, humid conditions, abundant conidia and sclerotia produced by the causal fungus give the lesions a black, sooty appearance.

Both zonate leaf spot and sooty stripe can be controlled through crop rotation and use of less susceptible hybrids.

John E. Watkins
Extension Plant Pathologist

Producer questions underlying economics of farming

Would it be better not to plant next year or to plant and take a chance of losing more on volume?

Livestock feeders don't fill their yards when prices are low, so why do crop producers plant when the prices are low?

Just for the sake of discussion, a producer asked a Web on-line discussion group why not hold this year's crop in storage and not plant next year's crop. If you can't make any money with current prices, can you afford to invest in next year's crop.

He speculates that the price will go up above his costs of production (that's why he's holding this year's crop) but not for a year or two.

While maybe not practical for most, this question does emphasize the need to know the true costs of production in order to determine what is an acceptable selling price for your grain.

Paul Jasa
Extension Engineer

CROP WATCH

1998 University of Nebraska

Crop Watch is published from March to November by the University of Nebraska Institute of Agriculture and Natural Resources Communications and Information Technology, PO Box 830918, 108 Agricultural Communications Bldg., UNL, Lincoln, NE 68583-0918. To order either a printed or electronic (web) subscription or to change your address, write to *Crop Watch* at the above address or call (402) 472-7981. A sample copy of the Web version is available free at *http://www.ianr.unl.edu/cropwatchnews*

Lisa Jasa, Editor
Email: agcm005@unlvm.unl.edu

For more information about a particular subject, write the authors at the addresses below:

UNL Department of Entomology
202 Plant Industry Bldg.
Lincoln, NE 68583-0816

UNL Department of Plant Pathology
406 Plant Science Bldg.
Lincoln, NE 68583-0722

UNL Department of Agronomy
279 Plant Science Bldg.
Lincoln, NE 68583-0918

UNL Department of Agricultural Meteorology
236 L.W. Chase Hall
Lincoln, NE 68583-0728

Corn diseases *(Continued from page 199)*

until harvest to assess stalk rot in the field. Producers need to take an aggressive approach, checking fields at least once a week from now through harvest to assess the level of damage and prioritize the harvesting sequence. Fields with greater than 20-25% stalk rot should be harvested first. High winds or storms could easily flatten fields weakened by stalk rot. (See CropWatch 98-22, page 189 for more on this year's stalk rot situation.)

Three types of stalk rot are being found in Nebraska this year: Fusarium, the most common here; anthracnose, fairly uncommon until this year, and dipodia. To test for stalk rot, squeeze the lower four internodal regions to see if the stalk is easily crushed. In previous years, the recommendation may have been to just test the lower two internodal regions; however different stalk rot pathogens may become apparent in different parts of the plant. A few types of stalk rot, particularly anthracnose, can infect the entire plant and may not appear in the lower two nodes until the final stages of the disease.

Effectively managing one disease, such as grey leaf spot, often will lessens the impact of other diseases or stressors (e.g., stalk rot). Plants with severe foliar diseases may turn to the stalk for nutrition. If the plant is already suffering from stalk rot, its ability to get the necessary nutrients for plant growth and maintenance may be significantly lessened. Once decay starts, other pathogens and stressors can contribute to the plant's decline, creating an interacting complex rather than a single disease. Consequently, it can be important to determine what diseases are present in your fields and develop an overall disease management strategy.

Stalk rots are appearing as far west as Kearney County. A recent survey of fields in Hamilton County found anthracnose stalk rot incidences of 10%-40% in some fields, with some plants already falling to the ground.

Anthracnose is usually uncommon in Nebraska, however this year's weather pattern really contributed to its increase here and in parts of Iowa where it had not formerly been found.

It's still too early to assess potential impact on yields from grey leaf spot; however, the outlook may be slightly better this year than would normally be expected, due to the slightly advanced plant growth stage when the disease first infected plants.

Maize chlorotic mottle virus is also severe in corn in some areas of the state, hitting hardest in four counties of south central Nebraska. Gosper, Phelps, Harlan and Franklin counties all have fields with heavy damage due to the virus. In one field, yields were expected to decrease 45 bushels per acre while in a nearby field, yields were expected to drop from 180 to 100 bushels per acre.

While it's not unusual for the virus to attack in these counties, the outbreak this year is much more damaging and widespread. Sometimes the disease was found in soybean fields in volunteer corn, which may have served as a reservoir for the inoculum which then spread to nearby corn fields. There is also some indication that the virus may have spread east from this pocket and appearing differently among different hybrids.

Management

While control measures for these diseases are minimal to nonexistent at this point in the season, steps can be taken to reduce their impact next year.

To manage MCMV virus, plant CLN tolerant hybrids, consider rotation to another crop (e.g., soybeans), and manage volunteer corn in soybean fields.

To manage stalk rots, consider reducing planting density, select hybrids with good standability and strong stalk strength ratings, and consider rotating the field out of corn for one to several years. Some research indicates stalk rot is more severe in fields planted at higher densities (e.g., 29,000-32,000 plants per acre). While an anthracnose resistance gene exists, it is not known to be available in hybrids recommended for Nebraska. This attribute could be added to local hybrids in two to three years.

To manage grey leaf spot next year, consider planting a tolerant hybrid or be prepared to apply fungicide. Both the grey leaf spot and anthracnose pathogens are residue-borne. Residue management can be achieved through rotation or other measures.

Jim Stack
Extension Plant Pathologist
South Central REC, Clay Center

See you
at Husker Harvest Days!

Look for our display in the University of Nebraska building and enter to win a free 1999 subscription to *Crop Watch.*

Estimate grain amount to determine proper aeration system

How much grain is in that pile?

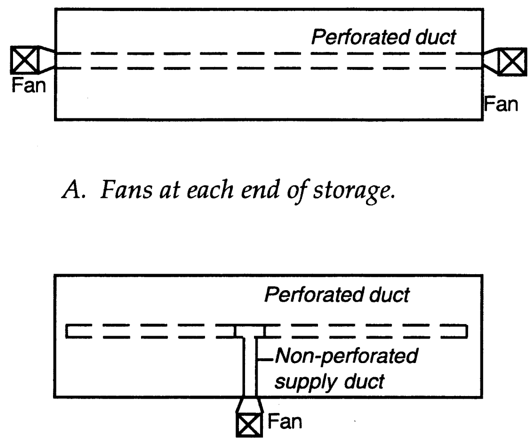
Piled carefully, a triangular pile of grain will have a height of about two feet at the center for every ten feet of width for a 23 degree filling angle. For example, a pile 50 feet wide at the base will be about 10 feet high at the center, and will contain about 200 bushels per foot of length. With grain 2.5 feet deep on a short sidewall and peaked in the middle, a pile 50 feet wide will hold about 300 bushels per foot of length.

The volume of storage can be estimated by breaking the pile into a rectangular portion the height of the sidewall and a triangular portion representing the peaked grain. By using the simple formulas of $V=LWH$ for a rectangular shaped pile and $V=LWH_p/2$ for a triangular shaped pile where V = volume, L = length, W = width, H = height, and H_p = height of the peak, the total volume can be determined. Grain occupies about 1.25 cubic feet per bushel so the volume can be converted to bushels by dividing by 1.25 (or multiplying by 0.8).

A 150-foot long grain pile like the above example would contain about $(150 \times 50 \times 2.5 + 150 \times 50 \times 10 / 2) \times 0.8 = 45{,}000$ bushels. The actual volume is slightly less because of the slope of the grain at the ends of the storage length.

How big an aeration fan is needed?

The volume calculation is important to determine the size of the aeration system needed to keep the grain in condition. A minimum airflow rate of 0.1 cfm per bushel is needed, resulting in an aeration system capable of delivering at least 4,500 cfm for this example. A rough rule of thumb is to provide one fan horsepower for each 20,000 bushels of peaked storage (for less than a 20-foot peak) in long piles with a large, perforated duct down the center of the pile (for widths less than 60 feet).



A. Fans at each end of storage.

B. Manifold in center of storage.

Aeration for storage over 100 feet

Two one horsepower fans, one at each end of a long duct down the centerline of the pile, would provide the aeration for this example (*Figure A, left*). Two fans were used because aeration duct length should not exceed 100 feet. An alternative would be a single two horsepower fan with a non-perforated supply duct that tees into the center of the lengthwise aeration duct (*Figure B, left*). The ducts must be sized to handle the airflow rates.

For more information, see *Dry Grain Aeration Systems Design Handbook*, published by Midwest Plan Service, and available at local Cooperative Extension offices.

Paul Jasa
Extension Engineer

New book addresses dry grain aeration systems

A new book from the Midwest Plan Service can help agricultural producers design and build better dry grain aeration systems.

Dry Grain Aeration Systems Design Handbook, MWPS-29, provides guidelines for selection, sizing, locating and evaluating grain aeration systems. It also presents designs for commonly used systems.

The publication discusses basic aeration considerations, system design principles and system components and contains about 50 illustrations, 20 tables and more than a dozen design examples, including aeration pads, systems for cylindrical bins and designs for rectangular flat storage systems.

The book costs $20 plus applicable sales tax and $3.50 for postage and handling. It was prepared by Midwest Plan Service, a cooperative regional research and extension organization representing the 12 landgrant universities in the north central region, including the University of Nebraska.

Books can be ordered from Agricultural Engineering Plan Service, 219A Chase Hall, University of Nebraska, Lincoln, Neb., 68583-0727, or call (402)472-6718.

Gerald Bodman
Extension Agricultural Engineer

Last resort storage *(Continued from page 199)*

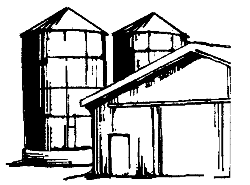
should be about equal to the pile depth.

The grain must be below 15% moisture (lower for longer term storage) and below 50°F. The pile should be built carefully and uniformly, moving the auger down the length of the pile slowly. To achieve the maximum slope on the side of the pile, the grain should not be permitted to drop more than a very short distance to the grain surface, particularly when the pile is topped off. It is very important to avoid hills, valleys, folds, and crevices that collect water in small areas and concentrate it down into the pile.

Once a pile is started, it should be finished as quickly as possible before rainfall. Rain will cause a wet layer which will be covered when more grain is added. This wet layer will be difficult to manage, even with aeration. After the pile is built, it should be enclosed with a fence to keep animals and children away as any footprint or indentation on the grain surface is an inlet for water.

Grain in emergency storage doesn't require a cover. The small amount of losses that occur in less than a month of storage usually don't justify the cost of the cover. If properly shaped, the pile will naturally shed water and form a slight "crust", reducing infiltration. Even if one inch of rain was to be totally absorbed, that is only enough moisture to increase the grain moisture content from the original 15% to about 20%, only in the first foot of grain. Most of the rain will either run off the pile or drain through the pile and out the sides since the floor is crowned.

Grain in temporary storage should be covered to protect it from wildlife and reduce moisture movement, particularly with longer term storage; however, once a cover is placed over the grain pile, problems may arise with condensation below the cover and aeration is required. Commercial storages usually place small ducts, closely spaced, over the top of the pile before covering to serve as air inlets to remove the condensation. They use negative airflow (suction) on the large duct(s) below the pile to draw air down through the grain mass. This also sucks the cover down against the grain surface, holding it from flapping in the wind. The aeration fan should run continuously, maintaining the grain temperature close to the air temperature.



Even though the grain is dry when it's moved into temporary storage, it needs be aerated to control grain temperature to reduce mold and insect activity and prevent moisture migration. The fan must be run continuously or often enough to keep the grain temperature within 10°F of the average daily temperature, to reduce moisture migration from convention currents. The large, perforated ducts placed on the floor have to be aeration ducts, with enough open area to be effective in moving air (10% to 30% open, depending on the design). Ordinary plastic drainage tile doesn't work very well because it doesn't have enough perforated area for good air movement (only about 1% open), but it is suitable for the small air inlets on top of a large covered pile.

The grain should be removed from temporary storage as soon as possible to reduce the possibility of losses.

The pile should be placed in an area of good all-weather access because unloading may occur mid winter or during spring warmup. Be aware that the soil under the pile will not freeze, making loadout difficult in wet weather. If the grain is to be held longer, more time and money needs to be spent on proper site preparation, an actual structure, aeration, and storage management to minimize losses. This time and expense often makes on-ground storage less attractive, except as a last resort.

(Some of this material was adapted from *Temporary Corn Storage in Outdoor Piles*, AE-91, published by Purdue University)

Paul Jasa
Extension Engineer

Rust strikes alfalfa fields

Recent warm, humid weather has caused rust to form in many alfalfa fields. Rust rarely infects our alfalfa before mid-July because it won't overwinter here, but if the summer is hot and humid, like this year, rust blown up from the south can infect our fields.

It usually causes little damage in fields harvested monthly, but more mature alfalfa or alfalfa grown for seed can be injured and defoliated. To minimize damage harvest rust-infested fields early.

Heavy rust infections can cause leaf drop and defoliation of alfalfa if plants aren't cut regularly, greatly reducing seed yield and quality.

Rust-infected hay sometimes causes allergic reactions in animals, more often with horses than with ruminant livestock.

Summer seedings infected with rust may be weakened and not develop as much winterhardiness as normal, making them more susceptible to winterkill. If your fields have rust, monitor them closely next spring to determine early if you need to change your cropping plans.

Bruce Anderson
Extension Forage Specialist

Existing farm buildings will need reinforcement for grain storage

Many producers may use existing buildings for storage of some of this year's harvest. These storage facilities will need reinforcement to avoid stretching or buckling from the pressures exerted by the stored grain. They also will need properly designed and managed aeration fans and ducts to control grain temperatures during storage.

All grain stored must be properly dried and cooled before going into storage, and then it must be aerated during storage. Corn and grain sorghum should be dried below 15.5% moisture for storage until spring or below 14% for storage into summer. Soybeans should be dried one point lower than corn and sorghum. The right moisture level is critical because wet grain continues to respire and decline in quality.

Pole barns and machine sheds need to be reinforced with cables or braces if grain will be stored higher than 2 feet along the walls. Unreinforced metal walls will stretch or buckle as grain depth increases. Unanchored walls or partitions will move, buckle, or collapse without appropriate support and fastening to the floor.

Grain pressure is not even throughout the height of the stored grain and increases incrementally from the top to the base, where pressure is greatest. About 23 pounds of pressure per square foot is exerted on the grain walls per foot of depth. For example, grain stored 6 feet high exerts a total force of 414 pounds per linear foot of wall, with a pressure of 138 pounds per square foot at the base of the wall.

To withstand the lateral pressures exerted by stored grain, walls must be reinforced at the posts, trusses, and post-to-truss connections. The walls should be tied together at the eave by a cable if the truss has not been designed and connected to carry the grain load. Also, cables or rods should be installed at about one-half the grain depth to provide support for the poles and walls. Care must be taken when installing the cables so trusses are not compressed or walls become buckled when grain is loaded into the building.

Bin rings or wooden grain walls could be used to keep the grain pressure off the walls of an existing building. One or two bin rings can be set on the floor and anchored as recommended by the manufacturer to provide a round storage area. A set of self-supporting, portable grain walls could be used to line the walls of a building or to form a partition in part of the building. These walls must be properly designed and installed to withstand the forces from the grain during storage. In addition, these storage areas must be filled and emptied from the center in order to prevent uneven sidewall loading. (See illustration in *Crop Watch* 98-22, page 191, for an example of these structures.)

Buildings to be converted for grain storage should be well-drained. A layer of plastic at least 6 mils thick should be placed on the floor, whether cement or dirt, to reduce moisture migration into the grain. A well-designed aeration system of tubes, ducts and fans is imperative for stored grain, not for drying, but to maintain grain quality. These ducts must be sized and located to aerate the entire grain mass, with a spacing typically about the same as the depth of the stored grain. Aeration is needed to keep the entire grain mass within 10 degrees of the average outside air temperature in order to minimize moisture migration from thermal convection currents.

For more information about grain storage and the management and aeration of stored grain, contact your local Cooperative Extension Office.

Gerald Bodman
Extension Agricultural Engineer
Cheryl Alberts
IANR News Writer

Calculate the true costs of storage

Any storage costs money, especially when considering the interest that may be accumulating because the grain was not sold. The interest on operating or equipment loans should be counted as a cost of storage if the payments are delayed. Even without loans, the interest which could be gained if the proceeds of grain sales could be invested elsewhere should be counted. Aeration systems are required for temperature management regardless of the moisture content, adding to the cost, both capital and labor. Estimates of permanent storage costs are between 10 and 40 cents a bushel per year, averaged over the life of the bin and equipment, depending on the type and size of the system. Temporary storage costs are typically higher when considering some of the equipment is used only one time. Also, unlike permanent installations with push-button operation, loading and unloading temporary storage is typically at higher cost and labor, possible with more grain damage or contamination. A considerable improvement in the grain prices is required to recover these costs.

Paul Jasa
Extension Engineer

Management varies among systems

Proper air flow important to quality storage

Grain harvested too wet for safe storage is usually dried to protect grain quality and provide storage flexibility. Regardless of the grain drying system, air flow is the key to successful drying. When more air is moved through the grain, more water will be carried out. Adding heat does not reduce the air flow needed to safely dry grain and often causes overdrying near the heat source. Any added heat lowers the relative humidity of the air, allowing for more moisture removal per given volume of air. Increasing the air flow dries the grain faster and reduces the chance of spoilage.

Problems arise when producers try to use bins and/or fans for purposes other than what they were designed for, such as high temperature drying in a storage bin. The difference in grain drying systems' fan sizes, configuration, air flows, operating temperatures, and filling depths need to be recognized for proper management *(See table)*. With this basic understanding, the systems can be operated for maximum efficiencies while protecting grain quality.

Table 1. Typical operating parameters of several grain drying systems

Drying System	*Depth feet*	*Air Flow cfm/bu*	*Temperature °F*
Column dryer (Batch or continuous flow)	<2.5	75-125	180-220
In-bin high temperature	2.5-4	8-15	120-160
In-bin high temperature (with stirrator)	6-9	8-15	120-160
Roof bin-batch dryer	2.5	8-15	120-180
In-bin low temperature	<18*	2-5	ambient + 10
Natural air drying	<18*	1.25-3	ambient
Storage (aeration only)	Varies	0.1-0.5	ambient

*Single batch in a deep bed (up to 18 feet) is not recommended for moisture contents above 20% (22% after Oct. 15). Above this moisture content, grain should be loaded in 4-foot layers weekly.

Low temperature systems — The biggest mistake with a low temperature or natural air drying system is filling it too quickly. As the depth increases, the air flow per bushel decreases, reducing drying efficiency. Low temperature systems with inadequate air flow rates can actually increase the chance of spoilage because the grain temperature is raised. If moisture contents are above 20% (22% after Oct. 15), the grain bin should not be filled in a single batch but rather in layers. Better yet, if several bins are available, layers of grain should be spread into all of them. Distributing the drying load over more than one bin maximizes the drying capacity. Also, early in the season the moisture content is highest. The wettest grain can be dried closest to the bottom of each bin where the drying potential of the air is highest. Stirrators should **not** be used because they disrupt the drying front moving through the grain and mix layers.

High temperature systems — Any bin dryer operated above 100°F is considered a high temperature in-bin dryer. Whether a batch is dried and cooled in a shallow bed before moving it into the final storage bin, or dried and cooled using stirrators, **the biggest mistake in these systems is filling them too deep.** The extra depth decreases the air flow rate per bushel, increases the drying time, and overdries the bottom layer of grain. If stirrators are not used, the optimum bed depth is 2.5 to 4 ft. If stirrators are used, the optimum depth ranges from 6 to 9 ft. Stirring devices help prevent overdrying the bottom layer and reduce the chance of spoilage on the top layer but the extra depth requires a fan with more horsepower and higher air flow.

Drying capacity decreases disproportionately as depth increases. For example, drying 26% moisture corn to 15% at 7.5 ft. depth may take 41 hours in a high temperature system with a stirrator, while doubling the depth increases the drying time to over 100 hours. Additionally, initial moisture content has a significant effect on drying time. For example, drying 7.5 feet of 22% rather than 26% corn down to 15% moisture reduces the drying time required from 41 hours to about 27 hours.

Even if the grain is dry, fans should be run to cool the grain to within 10°F of the average outside air temperature. Cooling the grain below 35°F reduces biological and insect activity and minimizes moisture migration during the winter storage period. Since cooling is the primary concern, do not turn the fans off during rainy or humid weather until the grain is cooled. Failing to properly cool the grain can cause more problems than the small amount of rewetting that occurs from running the fan on a humid day.

Paul Jasa
Extension Engineer

Entomology offers distance graduate degree

In addition to conventional M.S. and Ph.D. programs in entomology, the University of Nebraska at Lincoln Department of Entomology now offers a distance M.S.

The new Distance M.S. option was developed for students who cannot participate in an on-campus degree program, and who do not need a conventional, research-based degree. The Distance M.S. degree emphasizes coursework and practical application of graduate training. It provides an opportunity for individuals working in agriculture, education, and similar areas to pursue a graduate degree. Complete information is available at *http://www.ianr.unl.edu/ianr/entomol/educatn/distancems.htm*

The following are a few highlights:

- The degree requires 36 credit hours (all of which can be obtained in distance courses)
- The degree requires 18 credit hours in entomology, and 9 credit hours in a minor area
- The specific course requirements are determined between the student and a supervisory committee of faculty, to develop a program that meets the specific needs of the student
- Distance courses for the degree are taught by the Department of Entomology via video and web-based (internet) materials; some credits from other institutions may be applied towards the degree (with permission)
- The degree can be completed in as few as two years, but typically would take three years
- Admission requirements include an undergraduate degree, and coursework in biology and chemistry.

For more information and application forms, contact:

Dr. Leon G. Higley
Graduate Committee Chair,
Dept. of Entomology
202 Plant Industry Bldg.
Univ. of Nebraska-Lincoln
Lincoln, NE 68583-0816
402-472-8689
lhigley@unlinfo.unl.edu

Corn drying rapidly, maturing ahead of average

Above normal temperatures for the third week in a row combined with limited precipitation, moved fall harvested crops rapidly toward maturity.

With the exception of a few areas in the east, precipitation was non-existent in most counties. Corn silage harvest was active in many areas and seed corn harvest was occurring as well. Producers continued getting machinery ready for fall harvest and considering options for fall storage. Wheat seeding was underway in the west. Other producer activities included hay harvest, hauling manure, moving grain and livestock marketing and care.

Corn condition rated 1% very poor, 2% poor, 15% fair, 67% good, and 15% excellent. Dryland corn rated 80% in good or excellent condition and 83% of the irrigated corn rated in those categories. Acreage reaching the dent stage neared completion at 94%, well ahead of 58% last year and average. Corn mature was at 9%, also ahead of 3% a year earlier and 6% average. Seed corn was being taken in many areas and some high moisture corn was being harvested. Drydown was moving ahead rapidly with moisture levels in some fields in the low 20's.

Soybean condition rated 2% poor, 14% fair, 70% good, and 14% excellent. Soybeans coloring moved to 37%, ahead of 30% last year and 26% average. Soybeans dropping leaves was at 4%, same as last year and just behind 6% average.

Sorghum condition rated 2% poor, 17% fair, 67% good, and 14% excellent. Coloring advanced to 79%, well ahead of 58% last year and 49% average. Sorghum mature was at 5%, with 1% last year and 3% average.

Dry bean condition rated 1% very poor, 7% poor, 31% fair, 51% good and 10% excellent. Acreage coloring moved quickly to 81%, near 77% last year and equal to the average. The amount of acreage dropping leaves was at 40%, near 41% last year and 39% average. A few fields of kidney beans were being harvested in the southwest.

Alfalfa condition rated 1% very poor, 6% poor, 20% fair, 62% good and 11% excellent. Third cutting activities were near completion at 90%, ahead of 83% last year and 80% average.

Winter wheat seeding advanced to 9%, same as average, but ahead of 7% last year.

Nebraska Agricultural Statistics Service